

REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application.

Claims 1-4 and 6 are currently being prosecuted. Claim 1 is independent. Claim 1 has been amended to include the subject matter of claim 5 and accordingly claim 5 has been cancelled. Thus, no new matter has been added.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims. Reconsideration of this application is respectfully requested.

Interview

Applicant thanks the Examiner for discussing this application with Applicant's representative on July 11, 2008. During the discussion, the differences between the bonding ratio and the mixing ratio were explained. No agreement was reached pending a further update search and detailed review. Comments presented during the discussion are reiterated below.

Rejections under 35 U.S.C. § 103(a)

Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as unpatentable over He et al. in view of Morgan et al. Also, claims 1-4 are rejected under 35 U.S.C. § 103(a) as unpatentable over Mikami et al. in view of Morgan et al. Further, claim 5 is rejected under 35 U.S.C. § 103(a) as unpatentable over Mikami et al. in view of Morgan et al. and Symietz. Lastly, claim 6 is rejected under 35 U.S.C. § 103(a) as unpatentable over Mikami et al. in view of Morgan et al. and Sasaki et al. Applicant respectfully traverses these rejections.

While not conceding to the Examiner's rejection, but to merely advance prosecution only, claim 1 has been amended to further emphasize the distinctions between the present invention and the cited art by incorporating the subject matter of dependent claim 5.

The present invention is directed to a powder coating composition powder comprising coating particle including thermosetting resin powder, an adhesive binder, and a flake pigment bound to a surface of said thermosetting resin powder by means of said binder; wherein said powder coating particle has an average particle size of at most 100 μ m based on D50 conversion, a bonding ratio between said thermosetting resin powder and said flake pigment is in a range from 90% to 100%, and said adhesive binder is of at least one type selected from a group consisting of terpene resins, terpene/phenol resins, terpene hydrogenated resins, and terpene/phenol hydrogenated resins, as recited in claim 1.

In order to improve adhesion between the flake pigment and the resin powder, a flake pigment is bound to a surface of the thermosetting resin powder by means of the claimed adhesive binder, the powder coating particle has an average particle size of at most 100 μ m based on D50 conversion, and a bonding ratio between said thermosetting resin powder and said flake pigment is in a range from 90% to 100%.

The primary reference, He et al. is directed to a metal-containing platelet pigment suitable for a powder coating composition and to the powder coating compositions including such pigments. In particular, the meal platelets made of aluminum flakes of He et al. are provided with a viscous surface layer of polymer or other sticky liquid material. See column 2, lines 44-62 of He et al. As viscous surface layers, He et al. discloses acrylic resins, polyester resins, polyisocyanate resins, or melamin resins. These polymers of He et al. are distinguishable

from the adhesive layers of the claimed invention. Also, He et al. remains silent that these viscous surface layers of He et al. produces the claimed bonding ratio of 90% to 100%. Thus, the adhesive layers of He et al. are not equated with those of the claimed invention. Further, the second reference, Morgan cannot make up for the deficiencies of the primary reference He et al. because Morgan fails to disclose or suggest the claimed adhesive layer and the bonding ratio.

Meanwhile, with regard to the claimed bonding ratio, on page 3 of the outstanding Final Office Action, the Examiner asserts that when mixed, the aluminum powder is bonded to the surface of the powdery film-forming polymer and the mixing ratio is bonding ratio. However, as discussed with the Examiner, the mixing ratio is not equal with the bonding ratio.

In the present specification, for example, the Examples and Comparative Examples, a thermosetting resin and an aluminum flake powder are mixed in a ratio of 90-100%. However, the bonding ratio between two components finds different from this mixing ratio. See the following Table.

| | Comparative Example | | Present Example | |
|---|---|--|---|--|
| 1 | <i>Mixing ratio</i> | <i>Bonding ratio</i> | <i>Mixing ratio</i> | <i>Bonding ratio</i> |
| | 50.0g thermosetting polymer : 5.0g alumina flake = 90 % : 10% | Thermosetting polymer/alumina flake = 21 % | 100.0g thermosetting polymer : 10.0g alumina flake = 90 % : 10% | Thermosetting polymer/alumina flake = 98.4 % |
| 2 | <i>Mixing ratio</i> | <i>Bonding ratio</i> | | |
| | 50.0g thermosetting polymer : 5.0g alumina flake = 90 % : 10% | Thermosetting polymer/alumina flake = 2.0% | | |
| 3 | <i>Mixing ratio</i> | <i>Bonding ratio</i> | | |
| | 50.0g thermosetting polymer : 5.0g | Thermosetting polymer/alumina | | |

| | | | |
|--|--|---|--|
| | alumina flake = 90 %: 10% (mixing ratio) | flake = measurement not available | |
|--|--|---|--|

As seen from the Table, the mixing ratio and the bonding ratio of thermosetting polymer and alumina flake powder are not identical. Specifically, the Present Example and the Comparative Example of the present specification use the same mixing ratio (%) of two components. However, the bonding ratio (%) is not obtained in parallel. Therefore, it is evident that the same mixing ratio does not guarantee identical or similar bonding ratio. In more detail, see Table 2 and its relevant description of the present specification.

Regarding the Mikami et al. reference, Mikami et al. fails to teach the claimed features, in particular, a powder coating particle size, bonding ratio, and adhesive layer. Therefore, the claimed invention is not obvious over Mikami et al.

With regard to Mikami et al. in view of the second references, Morgan, Symiez, and Sasaki et al., they cannot make up for the deficiencies of the primary reference Mikami et al. as discussed above.

Further, Mikami et al. cannot combine with Morgan for at least the following reasons.

Mikami et al. employs 0.1-10 parts by weight based on 100 parts of the sum of the powder paint and pigment and when the amount exceeds 10 parts by weight, excessive coagulation occurs. See page 5, lines 23-29 of Mikami et al. In contrast, Morgan employs more than 10 parts by weight. See Table of Morgan. Accordingly, Mikami et al. cannot be combined with Morgan.

Second, Mikami et al. suggests timing of the addition of resin solution to be added after dry blending of the powder paint base and pigment was made. See pages 5, lines 35 to 6, lines 2

to produce a better result. However, Morgan discloses tackifying resin is mixed with the powder paint base and pigment at the same time. Accordingly, Mikami et al. cannot be combined with Morgan.

Third, Mikami et al. initially provides one-color type powder coating suitable for an automobile body. This one color powder coating has 150-mesh particle size. In contrast, Morgan's composition essentially employs a variety of color particles. Specifically, Morgan's composition is a mixture of particles of at least two different basic color, which is intended not to discern the color difference by the human eye. See Abstract and Examples of Morgan. Accordingly, Mikami et al. composition cannot be combined with that of Morgan.

As explained above, Mikami et al. and Morgan cannot be combined with each other as discussed above. Also, for the same reason, Symietz cannot further be combined with Mikami et al. and Morgan.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom are allowable due to the dependency.

Conclusion

All of the stated grounds of rejections have been properly traversed, accommodated, or rendered moot. Therefore, reconsideration and withdrawal all presently outstanding rejection and are respectfully requested and deemed proper. It is believed that a full and complete response has

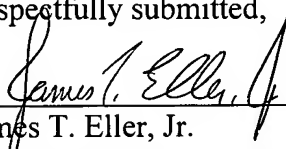
been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact James T. Eller, Jr., Reg. No. 39,538 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 
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